

Attorney Docket No. P13615-US2
Customer Number 27045

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1. (Currently amended) A method for improving a network connection in a wireless network, said method comprising ~~the steps of:~~
 - determining at least one quality measure for a channel of said network connection;
 - estimating a quality condition for said channel based on said at least one quality measure;
 - determining from the estimated quality condition whether the channel is primarily noise limited or primarily interference limited; and
 - selecting a packet type to be transmitted over said channel based on the determination of whether the channel is primarily noise limited or primarily interference limited, wherein the step of determining whether the channel is primarily noise limited or interference limited is performed individually for different packet types.
2. (Original) The method according to claim 1, wherein said at least one quality measure is determined from a receiver side in said network.
3. (Original) The method according to claim 1, wherein said at least one quality measure is determined from a transmitter side in said network.
4. (Original) The method according to claim 3, wherein said step of estimating a quality condition comprises ignoring receiver side quality measures and using only quality measures determined from said transmitter side.

Attorney Docket No. P13615-US2
Customer Number 27045

5. (Original) The method according to claim 1, wherein which one of said at least one quality measure is determined varies depending on a previously selected packet type.

6. (Original) The method according to claim 1, wherein an uncoded packet type is selected if said channel is primarily interference limited.

7. (Original) The method according to claim 1, wherein a coded packet type is selected if said channel is primarily noise limited.

8. (Original) The method according to claim 1, wherein a relatively short packet type is selected if said channel has a high bit error rate.

9. (Original) The method according to claim 1, wherein a relatively long, uncoded packet type is selected if said channel is neither interference limited nor noise limited.

10. (Original) The method according to claim 1, wherein said selected packet type is the same as a previously selected packet type.

11. (Original) The method according to claim 1, wherein said selected packet type is different from a previously selected packet type.

12. (Original) The method according to claim 1, wherein said network is an ad hoc network.

13. (Original) The method according to claim 1, wherein said network is a Bluetooth (TM) wireless network.

Attorney Docket No. P13615-US2
Customer Number 27045

14. (Original) The method according to claim 1, wherein said step of estimating said quality condition includes comparing said at least one quality measure to a predefined value.

15. (Original) The method according to claim 1, wherein said step of selecting a packet type includes waiting for a predefined time period before selecting said packet type.

16. (Original) The method according to claim 1, wherein at least an error detection quality measure is used to estimate said channel condition.

17. (Original) The method according to claim 1, wherein at least a Forward Error Correction quality measure and an error detection quality measure are used to estimate said channel condition.

18. (Original) The method according to claim 1, wherein at least a received signal strength quality measure and an error detection quality measure are used to estimate said channel condition.

19. (Original) The method according to claim 1, wherein at least a packets positively acknowledged quality measure and a power amplifier voltage are used to estimate said channel condition.

20. (Original) The method according to claim 19, wherein said packets positively acknowledged quality measure and said power amplifier voltage are determined based partly on at least one of an error detection quality measure, a Forward Error Correction quality measure, and a received signal strength quality measure.

21. (Currently amended) A communications device for communicating over a network connection in a wireless network, said device comprising:

Amendment - PAGE 4 of 15
EUS/J/P/05-9169

Attorney Docket No. P13615-US2
Customer Number 27045

a channel quality processor for determining at least one quality measure of a channel of said network connection;

a channel condition processor coupled to said channel quality processor for estimating a quality condition of said channel based on said at least one quality measure and determining from the estimated quality condition whether the channel is primarily noise limited or primarily interference limited; and

a packet type selector coupled to the channel condition processor for selecting a packet type to be transmitted over said channel based on the determination of whether the channel is primarily noise limited or primarily interference limited;

the channel condition processor being adapted to estimate and determine whether the channel is primarily noise limited or interference limited from packet to packet; and

wherein the channel condition processor is further adapted to determine whether the channel is primarily noise limited or interference limited individually for different packet types.

22. (Original) The communications device according to claim 21, further comprising a receiver unit, wherein said at least one quality measure is determined based on information obtained from said receiver unit.

23. (Original) The communications device according to claim 21, further comprising a transmitter unit, wherein said at least one quality measure is determined based on information obtained from said transmitter unit.

24. (Original) The communications device according to claim 23, wherein said channel condition processor is configured to ignore receiver side quality measures and to use only quality measures determined based on information obtained from said transmitter unit.

Attorney Docket No. P13615-US2
Customer Number 27045

25. (Original) The communications device according to claim 21, wherein which one of said at least one quality measure is determined varies depending on a previously selected packet type.

26. (Original) The communications device according to claim 21, wherein said packet type selector selects an uncoded packet type if said channel condition processor determines that said channel is primarily interference limited.

27. (Original) The communications device according to claim 21, wherein said packet type selector selects a coded packet type if said channel condition processor determines that said channel is primarily noise limited.

28. (Original) The communications device according to claim 21, wherein said packet type selector selects a relatively short packet type if said channel condition processor determines that said channel has a high bit error rate.

29. (Original) The communications device according to claim 21, wherein said packet type selector selects a relatively long, uncoded packet type if said channel condition processor determines that said channel is neither interference limited nor noise limited.

30. (Original) The communications device according to claim 21, wherein said selected packet type is the same as a previously selected packet type.

31. (Original) The communications device according to claim 21, wherein said selected packet type is different from a previously selected packet type.

32. (Original) The communications device according to claim 21, wherein said network is an ad hoc network.

Attorney Docket No. P13615-US2
Customer Number 27045

33. (Original) The communications device according to claim 21, wherein said network is a Bluetooth (TM) wireless network.

34. (Original) The communications device according to claim 21, wherein said channel condition processor is configured to compare said at least one quality measure to a predefined value.

35. (Original) The communications device according to claim 21, further comprising a timer, wherein said packet type selector is adapted to wait for said timer to expire before selecting said packet type.

36. (Original) The communications device according to claim 21, wherein at least an error detection quality measure is used to estimate said channel condition.

37. (Original) The communications device according to claim 21, wherein at least a Forward Error Correction quality measure and an error detection quality measure are used to estimate said channel condition.

38. (Original) The communications device according to claim 21, wherein at least a received signal strength quality measure and an error detection quality measure are used to estimate said channel condition.

39. (Original) The communications device according to claim 21, wherein at least a packets positively acknowledged quality measure and a power amplifier voltage are used to estimate said channel condition.

40. (Original) The communications device according to claim 39, wherein said packets positively acknowledged quality measure and said power amplifier voltage are determined based partly on at least one of an error detection quality measure, a Forward Error Correction quality measure, and a received signal strength quality measure.

Amendment - PAGE 7 of 15
EUS/JP/05-9169

Attorney Docket No. P13615-US2
Customer Number 27045

41. (Canceled)

Amendment - PAGE 8 of 15
EUS/J/P/05-9169